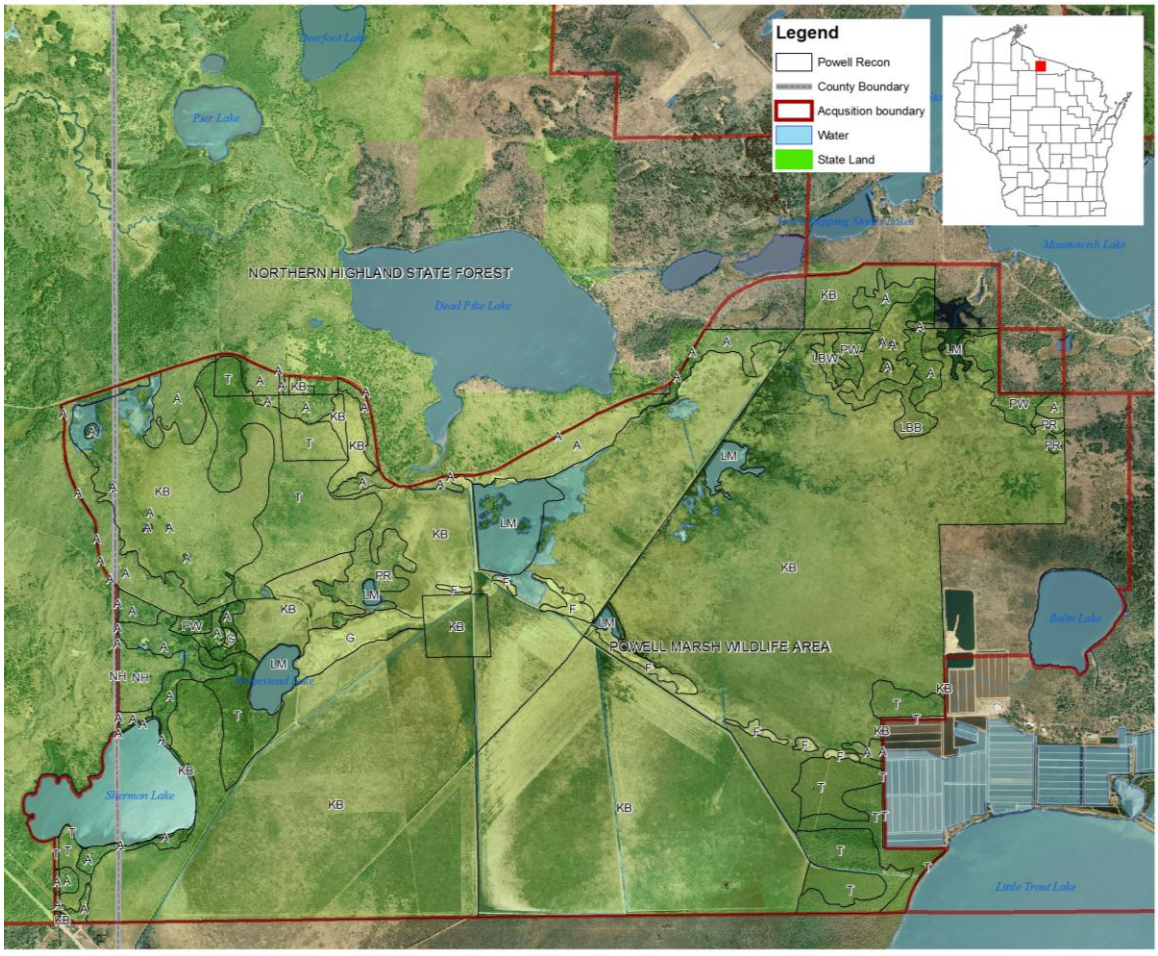
Powell Marsh State Wildlife Area
Interim Forest Management Plan

Revision Date 1/31/2013

Property Identifiers

Property Name and Designation: **Powell Marsh Wildlife Area**
Counties: **Vilas, Iron**
Property Acreage: **4,417**
Forestry Property Code(s): **6424**
Master Plan Date: **1980. New Plan Scheduled for 2010-2014**

Part 1: Property Assessment



General Property Description

Powell Marsh State Wildlife Area (PMSWA) is primarily an open peatland with several small flowages and small lakes. It encompasses a portion of a 20,000 acre wetland complex mostly owned and managed by the Lac du Flambeau Reservation. About 12,000 acres of the tribally owned lands have leatherleaf bog habitat similar to the wildlife area. While lakes are abundant in the region, large, open peatlands are rare across northern Wisconsin. Without intervention, these peatlands naturally convert to tamarack forest and black spruce muskeg.

- ***Landscape and regional context***
  The property lies within the Northern Highland Ecological Landscape, and is made up of three Land type Associations (LTAs): Powell Marsh (212Xb04), Vilas-Oneida Sandy Hills (212Xb02), and Vilas-Oneida Outwash Plains (212Xb03). The majority of the property is located within the Powell Marsh LTA.

  The Wisconsin Wildlife Action Plan (WAP; WDNR 2006a) recognized the PMSWA as a Conservation Opportunity Area (COA). The Manitowish Powell Peatlands COA is significant at a Midwest regional level for its large expansive open peatlands. The PMSWA is listed as an Important Bird Area (IBA) by the Wisconsin Bird Conservation Initiative.

- ***History of land use and past management***
  The open wetland system currently seen at Powell Marsh was maintained by wildfires for thousands of years. The last of the wildfires were in the 1930s and 1940s. In 1955, the PMSWA was established to produce more geese for hunters. Managers used prescribed fire to stimulate new growth for fall waterfowl migrations. A system of ditches and dikes was constructed to provide water level control, enable prescribed burning and allow limited farming.

  Today, Powell Marsh Wildlife Area provides significant, local wildlife-based recreation, particularly waterfowl hunting and birding opportunities. Management emphasizes habitat for waterfowl and species that require open wetland and grassland habitat. A combination of prescribed fire, hand cutting, mowing and shearing is used to limit the growth of shrubs and tamarack, while increasing the abundance of grasses and sedges.

Site Specifics

- ***Current forest types, size classes and successional stages****:*
  3,535 acres at Powell Marsh are non-forest open types such as farmland (32 acres), Upland grasslands (38 acres), Muskeg Bogs (3,328 acres), Lowland brush (27 acres), and Water (110 acres). 75% of the entire property is comprised of Muskeg Bogs.

  The 882 acres of Forested habitat are broken down into the following:

Forest Type	Acres	% of forested acres	% property acres	Forest Type Age Distribution: Age class(acres) *as of 2012*
Aspen	357	40%	8%	1-5(74), 26-30(205), 36-40(11), 41-45(34), 96-100(33)
Northern Hardwoods	29	3%	1%	
Red Pine	45	5%	1%	41-45(39), 61-65(6)
White Pine	44	5%	1%	41-45(24), 46-50(13), 96-100(7)
Tamarack	407	46%	9%	51-55(328), 61-65(79)

- ***State Natural Area designations:*** There are no State Natural Area designations on PMSWA
- ***High Value Conservation Forests (HCVF) or other resources/natural community types limited in the landscape:*** Areas of Northern Sedge Meadow are nesting habitat for yellow rail, which only nest at a few locations in Wisconsin
- ***Biotic Inventory status:*** A draft Property and Regional Analysis report of PMSWA was created in 2007 that contains information applicable to a biotic inventory. Drafts will be completed during the Powell Master Planning process.
- ***Deferral/consultation area designations:*** No final or draft sites.

- ***Rare species:*** Rare species and high-quality examples of native communities have been documented within the PMSWA. NHI screening will be conducted prior to all future management activities and prescribed burns will be scheduled to avoid the breeding season of a threatened bird.
- ***Invasive species:*** There are minimal amounts of spotted knapweed along service roads that are treated annually.
- ***Soils:*** Most soils are sands and gravels, some with a loamy mantle. Soil productivity is low compared to glacial till but relatively high for outwash sands. Wetlands are numerous; most have organic soils of peat or muck. The characteristic landform pattern is nearly level bog with common small sandy islands. Soils are predominantly very poorly drained peat. Common habitat types include forested lowland, ArQV, and TMC.

Cultural and Recreational Considerations

- ***Cultural and archeological sites (including tribal sites):*** The Vilas County Archaeological and Historical Sites map (WDNR, 2012) indicates one Historical site on this property. All known sites are to be protected during forest management operations.

- ***Recreational uses:*** Hunting, fishing, hiking, wildlife viewing, cross country skiing, trapping, fishing, and bird watching are all uses that are allowed on the Powell Marsh State Wildlife Area. There is currently a posted, no entry wildlife refuge located on the property that is closed from September 1 - December 31 except deer hunting during gun season.

Part 2: IFMP Components

Management Objectives (Outline primary forest management objectives):

Property Management goals at Powell Marsh SWA emphasizes habitat for waterfowl and other species that require open wetland and grassland habitats. A combination of prescribed fire, hand cutting, mowing and shearing is used to limit the growth of shrubs and tamarack, while increasing the abundance of grasses and sedges. Without intervention, these peatlands naturally convert to tamarack forest and black spruce muskeg.

Due to the nature of the overall objectives for this property; classic forest management objectives will be minimal on this property and confined to specific locations.

The primary forest management objectives include the following:

1. Manage forested stands after consultation with the property manager to determine specific objectives for the particular area.
2. Identification of viable forest acreage that is to be managed in a manner that will maintain that acreage in a productive forested cover type.
3. Identification of forested acreage that may potentially be converted to other cover types that could improve upon habitat that is otherwise fragmented or lacking from the property.
4. Sustainably maintain forest health and species diversity across the property.
5. Incorporate landscape scale opportunities into management decisions to include:
    - Improving forest composition and structure
    - Naturally regenerate stands whenever possible
    - Protecting rare and endangered species and habitats

Property Prescriptions (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives):

Stand specific objectives and prescriptions will be discussed and determined at the Annual Integrated Property Management meetings. Resource professionals associated with the property including the forester, district ecologist, fish manager, wildlife biologist/property manager, and law enforcement staff will be in attendance.

All forest management prescriptions will follow the forest management principles outlined in the "Wisconsin Forest Management Guidelines" and the "Silviculture Handbook" for those stands where continuation of the forested habitat type is the goal. For those areas where forested acreage may be converted to other cover types those guidelines will not apply.

❖ Silvicultural systems to be applied include:

- Intermediate thinning on even-aged managed species including but not limited to red and white pine, black spruce, tamarack, oak and red maple.
- Manage aspen on an even-aged basis, using a coppice with standards silvicultural system. Emphasis on smaller sized harvest patches with "standards" and Green Tree Retention will improve age and structural diversity for wildlife such as grouse, deer, and turkey.
- Manage black spruce and tamarack on both even-aged and all-aged silvicultural systems depending on site quality. Even-aged systems will utilize a strip clear cut method in large stands and a seed tree system in small stands. All-aged systems will utilize group selection or single tree selection with canopy gaps. Wetland Forest habitats such as Tamarack may need to be maintained on a shorter rotation to prevent succession of open areas.
- Manage red and white pine stands on an extended rotation, regenerating either by group selection, shelterwood or by clear cut and replanting. Retention of large pines during any thinning or regeneration stages will improve structural and age diversity for wildlife within the stand.
- Manage northern hardwood on an all-aged basis, creating all age classes through the installation of canopy gaps and thinning.

Approvals:

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Regional Ecologist Date

_____

Forester Date

_____

Property Manager Date

_____

Area/Team Supervisor Date